

REMARKS

Applicant thanks the Examiner for considering Applicant's prior arguments and entering amendments to the claims, and for the courtesy of the telephone interview held on May 12, 2006. Applicants have amended claims 1, 15, 21, 34, 35, 38 and 39, have added new claims 44-65, and have cancelled claims 28, 29, 30, 32, 33, 36, 37, and 40. As a result of these amendments, claims 1-7, 9-17, 19-27, 34, 35, 38, 39 and 44-65 are pending in the present application. Respectfully, Applicant submits that these pending claims should be allowed, for the reasons set forth below.

Silence with regard to any of the Examiner's rejections is not an acquiescence to such. Specifically, silence with regard to Examiner's rejection of a dependent claim, when such claim depends from an independent claim that Applicant considers allowable for reasons provided herein, is not an acquiescence to such rejection of the dependent claim(s), but rather a recognition by Applicant that such previously lodged rejection is moot based on Applicant's remarks relative to the independent claim (that Applicant considers allowable) from which the dependent claim(s) depends.

Telephone Interview

Applicants thank the Examiner for the courtesies extended during the telephone interview conducted on May 12, 2006 between the Examiner and Applicant's undersigned representative. During the interview, Applicant's representative and the Examiner discussed potential amending language to clarify the claim scope.

Claim Rejections - 35 U.S.C. § 103(a)

The Examiner previously rejected all pending claims, claims 1-7, 9-17, 19-30, and 32-40, under 35 U.S.C. § 103(a) as being unpatentable over U.S Patent No. 5,737,581 to Keane in view of U.S. Patent No. 5,897,629 to Shinagawa et al.

In particular, the Examiner rejected independent claims 1, 15, 34, 35, 38 and 39 on the basis of the same reasoning. The Examiner recognized that Keane did not teach limitation 1(d) of claim 1:

1.(d) generating a next plurality of business models from the simulated plurality of business models by performing an evolutionary method including (i) determining business-model fitness in dependence on the operational business-model performances, (ii) selecting one or more business models in dependence on their fitness, and (iii) transforming the selected business models into new business models by applying one or more genetic operators, wherein the new business models incorporate elements of the selected business models

Office Action, p. 5. However, the Examiner stated that limitation 1(d) was taught by Shinagawa, and that it would have been obvious to combine the teachings of Shinagawa with those of Keane. Office Action, pp. 5-7.

In rejecting independent claim 15, the Examiner cited the discussion of claim 1(d) as the basis for finding that limitation 15(e) was taught:

15.(e) generating a next plurality of business models from the simulated plurality of business models by performing an evolutionary method, wherein the evolutionary method uses a fitness dependent on the operational business-model performances and applies genetic operators to the building-blocks of business models

Office Action, p. 15. Limitation (e) of independent claims 34 and 38, and limitation (d) of independent claims 35 and 39, are identical to limitation (e) of claim 15, and accordingly the

Examiner cited the discussion of claim 15(e) as the basis for finding that those limitations were taught by Shinagawa as well. Office Action, pp. 22, 25, 29, 31.

It follows, therefore, that the rejections of all of the pending independent claims, claims 1, 15, 34, 35, 38 and 39, all are based upon the same reasoning and asserted prior art.

Applicant does not concede that the Examiner was correct in his rejections. However, while reserving the right to prosecute these or similar claims in the future, Applicant has amended these claims to respond to the Examiner's comments, and respectfully suggests that the Examiner should withdraw these rejections on the basis of these amendments, for the following reasons, which will be explained with reference to the Examiner's discussion of claim 1, but which apply equally to amended claims 15, 34, 35, 38 and 39 as well.

Applicant has amended claim 1 (and claims 15, 34, 35, 38 and 39) to add the requirement in limitation (a) that the "operational performance models" associated with the "computer-simulateable business models" which are the subject of the genetic algorithm must "comprise financial models."

In addition, Applicant has amended limitation (d) of claim 1 (and the equivalent limitations of claims 15, 34, 35, 38 and 39) as follows:

(d) generating a next plurality of business models from the simulated plurality of business models by performing an evolutionary method directly on the business models, including (i) determining business-model fitness in dependence on the operational business-model performances including financial performances, (ii) selecting one or more business models in dependence on their fitness, and (iii) transforming the selected business models into new business models by applying one or more genetic operators directly to the business models, wherein the new business models incorporate elements of the selected business models.

Respectfully, Applicant suggests that Shinagawa does *not* teach amended limitation 1(d).

Amended independent claim 1 as a whole deals with generating business models, for solving selected business problems. As a part of that overall process, limitation (d) teaches that a new generation (a “next plurality”) of business models are to be generated by performing an evolutionary method based on the prior generation.

Before the current amendment, limitation (d) did not require that the evolutionary method be performed *“directly on the business models.”* As a result, the Examiner rejected claim 1, on the ground that Shinagawa taught the use of evolutionary methods in the generation of business models. Shinagawa proposed a *different* use of genetic algorithms than the currently amended claims set forth, however. Rather than applying genetic algorithms *directly* to the business model and thereby solve the underlying problem (which Shinagawa rejected as taking “too much time”, column 2, lines 65-67), Shinagawa discloses applying genetic algorithms *to the search strategy* used to explore the solution space.

(Column 4, line 29 to column 5, line 1) As Shinagawa summarizes:

the problem solver of the present invention employs the cyclic processes of: *optimizing solution searching strategies using a genetic algorithm*, carrying out a search according to the strategy being optimized, and feeding the search result back to the next *strategy optimization*. (Column 4, line 63 to column 5, line 1) (Emphasis added.)

Thus, in Shinagawa the genetic algorithms are used, *not* directly to modify the underlying business models, as in amended independent claim 1 herein, but to modify *a search strategy for looking for business models*. Indeed, as pointed out above Shinagawa utilizes this indirect approach because he concludes that it is impractical (“too much time” is

required) to actually apply the genetic algorithms directly to the business models themselves, as amended claim 1 requires. Shinagawa therefore teaches away from the direct application of genetic algorithms to business models.

It follows that Shinagawa does not teach limitation (d) of claim 1, as amended, but on the contrary actually teaches away from it.

Thus, the combination of Keane and Shinagawa does not teach claim 1 as amended, and amended claim 1 should be allowed. As discussed above, because amended independent claims 15, 34, 35, 38 and 39 were rejected based on the same reasoning, and have been amended to include the same further limitations, those claims also should be allowed. Thus, pending independent claims 1, 15, 34, 35, 38 and 39 are all allowable.

Because Applicant's pending independent claims 1, 15, 34, 35, 38 and 39 are allowable, Applicant's pending dependent claims 2-7, 9-14, 16-17 and 19-27, which depend from those independent claims, are also allowable.

New Claims 44-65

Applicant has added new claims 44-65. These new claims are directed more particularly at methods and systems for applying genetic algorithms to develop business models, with the particular feature that a business model does not evolve its features independently and in a static environment, but rather evolves in an environment including *other* business models, with which it may be competing, and which other models also are simultaneously evolving in the same dynamic business environment. This approach is of unique value because the methods and systems offer dynamic, rather than static,

environments in which the business models are to evolve. See, for example, limitation (d)(i) of new independent claim 44:

determining said model's fitness based at least in part upon the operational performance of the said evolvable business model in the business ecosystem containing said plurality of evolvable business models

Support for these new claims is provided, without limitation, at pages 13-15 and 19 of the specification.

**CONCLUSION**

Applicant believes this Response to be fully responsive to the present Office Action. Thus, based on the foregoing Remarks, Applicant respectfully submits that this application is in condition for allowance. Accordingly, Applicant requests allowance of the application.

Applicant invites the Examiner to contact the Applicant's undersigned Attorney if any issues are deemed to remain prior to allowance.

Respectfully submitted,

Date: June 2, 2006  
**Customer No: 25181**  
Patent Group  
Foley Hoag, LLP  
155 Seaport Blvd.  
Boston, MA 02210-2600

/s/deutsch/  
\_\_\_\_\_  
Stephen B. Deutsch, Reg. No. 46,663  
Attorney for Applicant  
Tel. No. (617) 832-1118  
Fax. No. (617) 832-7000